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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/960,662	09/22/2001	Robert H. Gore	50773	5996

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EXAMINER

ZALUKAEVA, TATYANA

ART UNIT	PAPER NUMBER
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1713

DATE MAILED: 05/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/960,662

Applicant(s)

GORE ET AL.

Examiner

Tatyana Zalukaeva

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) 8 and 10-32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7,9 and 33-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-35 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

1. New claims 33-35 are added by Applicants' amendment of 03/01/2004.
2. Claim 1 has been amended to introduce the limitation that the initiator and monomer feed were added after the solvent was heated to appropriate temperature.
3. Claims 1-9 and 33-35 are pending are being examined on the merits.
4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
5. Claims 1-6 stand rejected under 35 U.S.C. 102(b) as being anticipated by Cassatta et al (U.S. 4,533,681).

With specific regard to claims 1, 2, 4-6 Cassatta discloses a method of making crosslinked , preferably acrylic polymer particles (abstract). For the steps of the process, attention is drawn to col.12 (B), lines 17-47, wherein the **solvent methyl amyl ketone was preliminary refluxed (temperatures sufficient to activate the initiator)**, see line 30, and to this refluxing solvent **the initiator feed** of 100 g of tert-butyl perbenzoate **was added to the monomer feed** presented in Table in col. 20-25 that contains monomers and crosslinking monomer, and then the monomer feed and initiator feed was added to a refluxing solvent feed in a reactor vessel. Therefore the initiator feed and the monomer feed are combined before adding to the reaction vessel where the solution is heated to the temperature sufficient to activate the initiator. With the reference to claim 3 see Example 2, lines 54, 55, Example 3, col.13, lines 1-9,

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Examples 4, col.13, lines 25-32. With regard to claim 9, Cassatta disclose preferred crosslinked comonomers, and among those glycidyl methacrylate in col. 9, line 23.

6. Claims 7 and 33, 34 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Cassatta.

The above rejection with regard to the particle size were made in the sense of *In re Fitzgerald* (205 USPQ 594). (CAFC) or *In re Spada*, 911 F 2d 705, 709 15 USPQ 1655, 1658 (Fed. Cir. 1990), which settles that when the claimed compositions are not novel, they are not rendered patentable by recitation of properties, whether or not these properties are shown or suggested in prior art. It is the base presumption that the properties governing the claimed copolymers, if not taught, may be very well met by the copolymers of Cassatta since the copolymer particles of Cassatta are essentially the same as and are made in essentially the same manner as applicants' polymer particles.

7. Claims 1, 3-6, and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by Saethre et al (U.S. 6,346,592).

Saethre discloses a process for making crosslinked solution polymer particles (abstract), wherein the steps of the process are best depicted by Examples A4.1 and A 4.2 in col.9:

Cross-linked PMMA Particles. It is noted that the steps of providing the feed of monomer and crosslinking agent, providing the feed of initiator are inherently present. A solution of PVP in methanol (2636.25 g) **was added to a reactor vessel** (therefore

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reaction vessel comprising solvent is provided) **and the mixture was boiled for 1 hour** (anticipates step d of the instant claim 1). The mixture was cooled to 53C before the addition of the monomer mixture of methyl methacrylate (337.50 g) and ethylene glycol dimethacrylate (0.750 g). A mixture of AIBN (9.00 g) and methanol (585.00 g) preheated to 30 was added when the temperature in the reactor was stable at 53C. This anticipates step e of claim 1 as well as presence of a solvent in the initiator feed as per instant claim 3. After 3 hours' polymerization, the temperature was gradually increased over 3 hours to 60 C.

A solution of PVP in methanol (2636.25 g) was added to a reactor (5.00 l) and the mixture was boiled for 1 hour with an agitation speed of 50 RPM. The mixture was cooled to 53C. before the addition of the monomer mixture of methyl methacrylate (356.20 g), glycidyl methacrylate (18.75 g) and ethylene glycol dimethacrylate (0.375 g). A mixture of AIBN (9.00 g) and methanol (585.00 g) was and added when the temperature in the reactor was stable.

8. Claims 2 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saethre.

It is the commonest of expedients to mix certain ingredients together before they are mixed into main stream to be produced. This is so well understood in many arts, as to require no extended discussion. Anyone making this mixture would follow one of four steps (order of addition) and it would be merely a matter of choice and within the skill of the art to adopt such procedure as it found most satisfactory. The results did not differ in

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any way, *In re Hempel*, 74 USPQ 171-173 (CCPA 1947). Sequence of adding ingredients is obvious.

Response to Arguments

9. Applicant's arguments filed 03/01/2004 have been fully considered but they are not persuasive.

Applicants' argument resides in contention that Cassatta et al. do not disclose particle sizes or polydispersities because they do not prepare polymer particles, rather they prepare cross-linked coatings. This is not found persuasive, because the second line in the abstract expressly states that the "polymer **particles** are formed".

Further, Applicants argue that the cross-linking polymerization of Cassatta cannot occur during the polymerization of the linear polymers as the cross-linking functionality is different from that used to form the linear polymer. Also, the cross-linking reactions of Cassatta do not employ vinyl polymerization. See column 8, lines 57-67, which describe the various cross-linking reactions. None of these cross-linking reactions involve reactions between ethylenically unsaturated monomers and cross-linking agents. This is not found persuasive, because the nature of a crosslinking agent is only recited in the instant claim 9 that has not been rejected under 35 USC 102 over Cassatta. With regard to a vinyl crosslinking pertinent to claims 1-6, Applicants arguments are more specific than the claims. Applicants reference to the instant specification to show the difference with Cassata's disclosure is irrelevant, because the rejection of the instant cla8ms, not

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the specification has been made. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., vinyl crosslinking with regard to claims 1-6) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

With regard to rejection of claims 1, 2-6 and 9 under 35 USC j 102(e) as being anticipated by Saethre (US 6,346,592), Applicants traversal does not contain any argument at all and/or any factual evidence to rebut prima facie case of anticipation. Therefore, the rejection is sustained as per reasons of record.

10. Additional prior art cited in PTOL-892 shows the polymerization process., wherein the solvent is heated before the monomer/catalyst feed is added to polymerization.

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tatyana Zalukaeva whose telephone number is (571) 272-1115. The examiner can normally be reached on 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tatyana Zalukaeva
Primary Examiner
Art Unit 1713

May 19, 2004

Tatyana Zalukaeva, Ph.D.
Primary Examiner
Art Unit 1713

